Vermont Mental Health Performance Indicator Project

DDMHS, Weeks Building, 103 South Main Street, Waterbury, VT 05671-1601 (802-241-2638)

MEMORANDUM

TO: Vermont Mental Health Performance Indicator Project
                 Advisory Group and Interested Parties

FROM: John Pandiani and Janet Bramley

DATE: September 5, 2003

RE: Measuring Children's Criminal Justice Involvement

This week's PIP was prepared in response to discussions in the Outcomes Workgroup of the National Data Infrastructure Grant Project. That group has spent a substantial amount of time discussing the relative merit of different approaches to measuring levels of criminal/juvenile justice involvement for community mental health service recipients. The most discussed approaches to measuring criminal justice involvement include client self report (usually collected in consumer surveys), clinician reports (usually recorded in mental health agency MIS systems), and official records (usually from criminal justice databases). One major issue has been the comparability of levels of criminal justice involvement that are based on these different methodologies.

This PIP compares two estimates of levels of criminal justice involvement for young people served by community mental health programs in Vermont. One measure is based on analysis of administrative data sets. The other measure is extrapolated from responses to a consumer survey. Specifically, the analysis reported here examines the impact of survey response bias on rates of criminal justice involvement that are generated by self-report questionnaires. The analysis involves comparing rates of criminal justice involvement (as recorded in a statewide criminal justice database) for two groups of 14 to 18 year old Medicaid reimbursed community mental health service recipients. One group includes all young people who responded to a 1999 mailed consumer survey (28% of all consumers in this age group). The other group includes all young service recipients who did not respond to the survey. (For a detailed description of the methodology and findings of this survey, visit http://www.state.vt.us/dmh/Data/99kidstechnicalreport.pdf)

This analysis used arrest rate as its measure of criminal justice involvement. Arrest rates were determined by measuring the number of individuals who were represented in both the consumer survey database (including both respondents and non-respondents) and the VIBRS (Vermont Incident Based Reporting System) database maintained by the Vermont Department of Public Safety. All arrests during the six months preceding the administration of the survey were selected for analysis because consumer surveys ask about arrest during this time period.
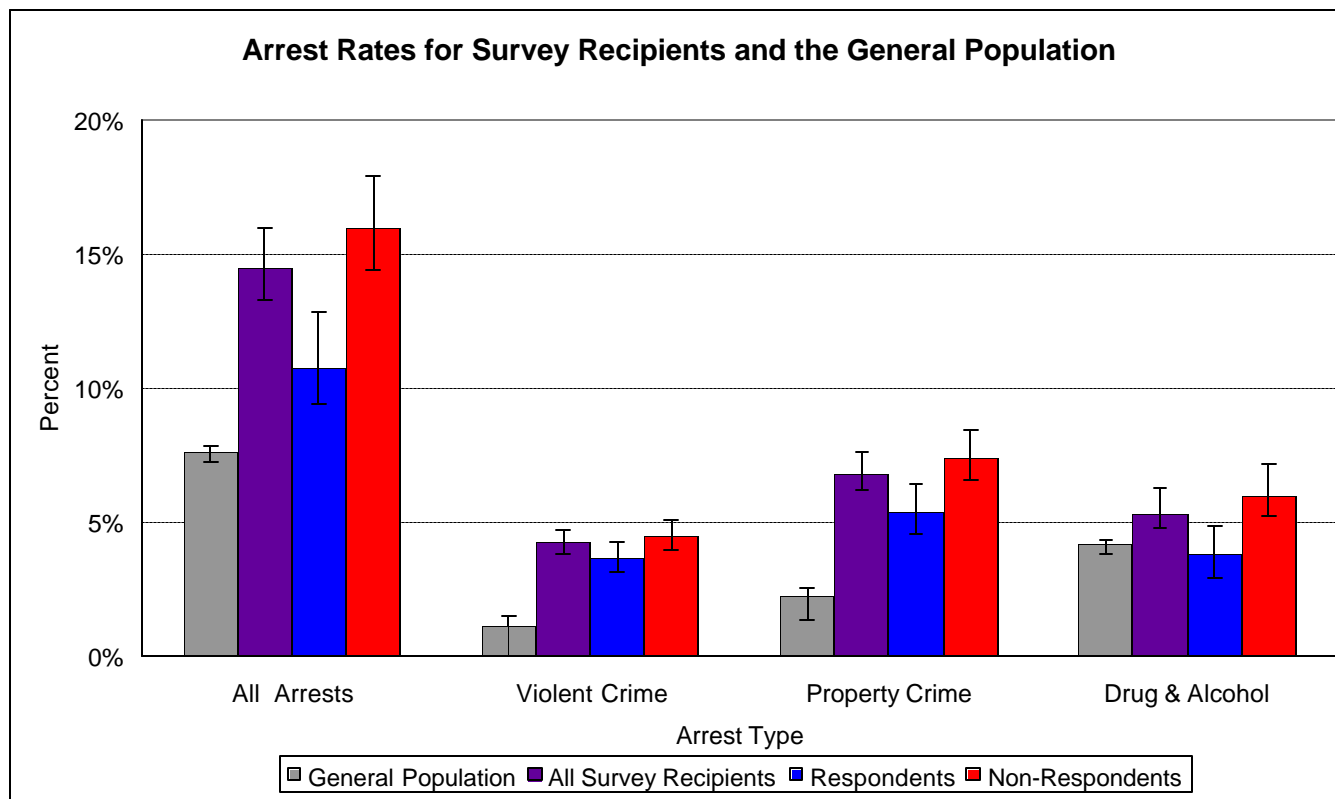
Because the survey database and the arrest database do not share unique person identifiers, Probabilistic Population Estimation was used to determine the unduplicated number of individuals who were represented in both data sets. (For a detailed description of the method of Probabilistic Population Estimation visit http://wwwthebristolobservatory.com/PPE1.htm)

Results indicate that survey non-respondents were significantly more likely than survey respondents to be arrested during the six months before the survey. Survey non-respondents were more likely than respondents to be arrested overall (16.0% vs. 10.8%), more likely to be arrested for property crime (7.4% vs. 5.4%), more likely to be arrested for drug and alcohol offenses (6.0% vs. 3.8%), and more likely to be arrested for violent crime (4.5% vs. 3.7%).

These findings indicate that the systematic bias introduced by survey non-response would have a significant effect on apparent rates of criminal justice involvement for youth who received community mental health services. Even if all respondents to the Vermont Youth Survey provided an accurate report of criminal justice involvement during the six months before the survey, the overall rate of criminal justice involvement indicated by the survey (10.8%) would have been 25% lower than the rate for all survey recipients (14.5%). This underestimation of criminal justice involvement would have had the greatest impact on drug and alcohol offense rates where the respondents' rate of criminal justice involvement was 28% lower than the rate for all survey recipients, and had the least impact on violent offenses where the respondents' rate of criminal justice involvement was 14% lower than the rate for all survey recipients.

We look forward to your comments, questions, and suggestions for future analysis pip@ddmhs.state.vt.us or call 802-241-2638.

Response Bias: Arrest Rates for Youth Aged 14-18
During the 6 Months Prior to the Vermont Mental Health Youth Survey of Fall 1999

Arrest Rates for Survey Recipients and the General Population

Legend: ■ General Population ■ All Survey Recipients ■ Respondents ■ Non-Respondents

Population	Total N	All Arrests		Violent Crime		Property Crime		Drug & Alcohol	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
General Population	45,140	3,442 (3352-3532)	7.6% (7.3-7.8%)	517 (504-531)	1.1% (0-1.5%)	1,005 (979-1030)	2.2% (1.4-2.6%)	1,889 (1834-1944)	4.2% (3.8-4.4%)
All Survey Recipients	1,073	155 (143-171)	14.5% (13.3-16%)	46 (41-51)	4.3% (3.8-4.7%)	73 (66-82)	6.8% (6.2-7.6%)	57 (51-67)	5.3% (4.8-6.3%)
Respondents	314	34 (30-40)	10.8% (9.4-12.8%)	12 (10-13)	3.7% (3.1-4.3%)	17 (10-13)	5.4% (3.1-4.3%)	12 (9-15)	3.8% (3-4.9%)
Non-Respondents	759	122 (110-136)	16.0% (14.5-17.9%)	34 (30-39)	4.5% (3.9-5.1%)	56 (50-64)	7.4% (6.6-8.4%)	45 (40-55)	6.0% (5.2-7.2%)

The Vermont Mental Health Youth Survey was sent to all young consumers aged 14-18 who had received Medicaid reimbursed services from a community mental health center child and adolescent program during the period January 1st - June 30th of 1999. Survey recipients include all potential respondents (all deliverable surveys).

Analysis is based on data provided to DDMHS by community mental health centers and the Department of Public Safety. Because these databases do not share unique person identifiers, Probabilistic Population Estimation was used to determine the number of individuals shared across data sets (with 95% confidence intervals).